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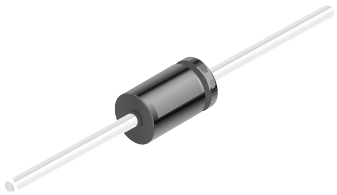
FAIRCHILD SEMICONDUCTOR®

Jameco Part Number 76970 (1N4003)

1N4001GP - 1N4007GP

Features

- Low forward voltage drop.
- High surge current capability.
- High reliability.
- High current capability.



DO-41
COLOR BAND DENOTES CATHODE

General Purpose Rectifiers (Glass Passivated)

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value							Units
		4001GP	4002GP	4003G	4004GP	4005GP	4006GP	4007GP	
V_{RRM}	Maximum Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
$I_{F(AV)}$	Average Rectified Forward Current, .375 " lead length @ T_A = 75°C	1.0							A
I_{FSM}	Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave	30							A
T_{stg}	Storage Temperature Range	-65 to +175							°C
T_J	Operating Junction Temperature	-65 to +175							°C

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	3.0	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	50	°C/W

Electrical Characteristics

T_A = 25°C unless otherwise noted

Symbol	Parameter	Device							Units
		4001GP	4002GP	4003G	4004GP	4005GP	4006GP	4007GP	
V_F	Forward Voltage @ 1.0 A	1.1							V
I_R	Reverse Current @ rated V_R T_A = 25°C T_A = 125°C	5.0 50							µA µA
C_T	Total Capacitance V_R = 4.0 V, f = 1.0 MHz	8.0							pF

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General Purpose Rectifiers (Glass Passivated)
(continued)

Typical Characteristics

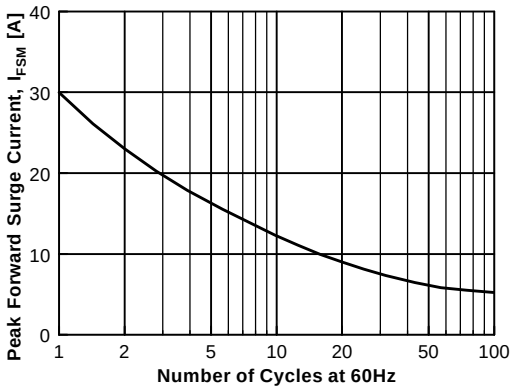

Figure 1. Non-Repetitive Surge Current

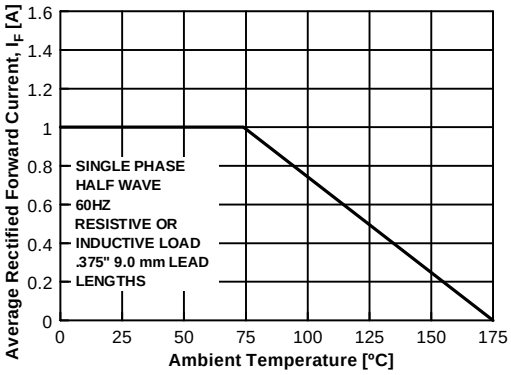

Figure 2. Forward Current Derating Curve

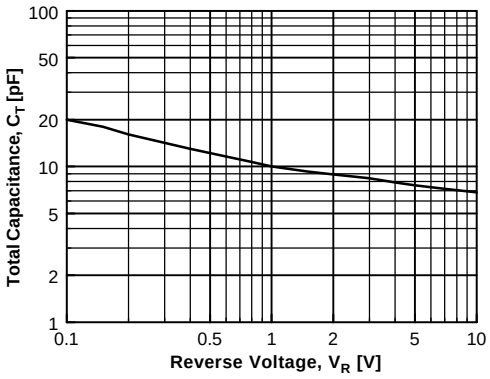

Figure 3. Total Capacitance

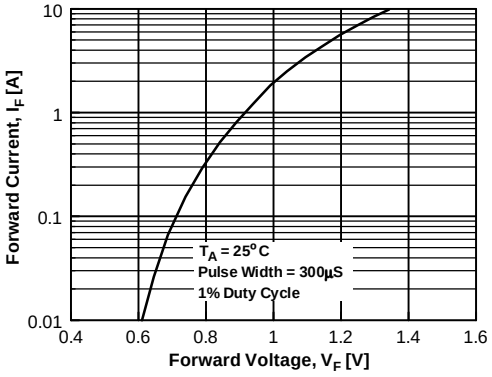

Figure 4. Forward Voltage Characteristics

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CROSSVOLT™	GlobalOptoisolator™	POP™	SuperSOT™-3	
DenseTrench™	GTO™	Power247™	SuperSOT™-6	
DOME™	HiSeC™	PowerTrench®	SuperSOT™-8	
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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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